



AUTOMOBILES



FUND AVAILABLE TO BUILD ROADS AND FOR UPKEEP

WASHINGTON, D. C., Dec. 18.—Over \$100,000,000 is available for road building and maintenance in the United States, of which approximately \$50,000,000 will probably be expended during 1921, according to figures compiled by the A. A. A. good roads board.

State bonds for highway improvement aggregating \$144,750,000 have been authorized during the last three years. During 1918 state bonds amounting to \$44,000,000 were authorized in Illinois and \$20,000,000 in Pennsylvania. The following issues were authorized during 1920:

California	\$10,000,000
Illinois	12,500,000
Indiana	1,000,000
Iowa	1,000,000
Kentucky	1,000,000
Louisiana	1,000,000
Minnesota	1,000,000
Mississippi	1,000,000
Montana	1,000,000
Nebraska	1,000,000
Nevada	1,000,000
New Mexico	1,000,000
North Carolina	1,000,000
Oklahoma	1,000,000
Pennsylvania	1,000,000
Rhode Island	1,000,000
Texas	1,000,000
Vermont	1,000,000
Washington	1,000,000
West Virginia	1,000,000
Wisconsin	1,000,000
Wyoming	1,000,000
Total	\$124,750,000

Due to the shortage and high prices of labor and materials, the cost of road building has increased to the point where very little of this money as yet has been expended. During 1920 a total of \$20,000,000 of state highway bonds have been voted as follows:

Alabama	\$25,000,000
Arizona	2,000,000
Arkansas	2,000,000
California	2,000,000
Colorado	2,000,000
Connecticut	2,000,000
Delaware	2,000,000
District of Columbia	2,000,000
Florida	2,000,000
Georgia	2,000,000
Idaho	2,000,000
Illinois	2,000,000
Indiana	2,000,000
Iowa	2,000,000
Kansas	2,000,000
Kentucky	2,000,000
Louisiana	2,000,000
Maine	2,000,000
Massachusetts	2,000,000
Michigan	2,000,000
Minnesota	2,000,000
Mississippi	2,000,000
Montana	2,000,000
Nebraska	2,000,000
Nevada	2,000,000
New Hampshire	2,000,000
New Jersey	2,000,000
New Mexico	2,000,000
New York	2,000,000
North Carolina	2,000,000
North Dakota	2,000,000
Oklahoma	2,000,000
Oregon	2,000,000
Rhode Island	2,000,000
South Carolina	2,000,000
South Dakota	2,000,000
Tennessee	2,000,000
Texas	2,000,000
Vermont	2,000,000
Virginia	2,000,000
Washington	2,000,000
West Virginia	2,000,000
Wisconsin	2,000,000
Wyoming	2,000,000
Total	\$209,000,000

The constitution of Kansas prohibited the state from engaging in internal improvements, but this difficulty was removed by the referendum at the recent election. That state may now pay one-fourth of the cost of road building and may not exceed \$10,000 per mile.

Two amounts of bonds authorized in the state of Virginia were not fixed in the referendum measure, but the legislature may consider the law which is to the extent of approximately \$20,000,000.

A proposal was approved in California increasing the interest on the state highway bonds from 4 to 5 percent to \$200,000,000 of the \$400,000,000 in bonds authorized in 1919.

The \$100,000,000 in bonds authorized in New Jersey are for the purpose of carrying the state's share of the cost of a vehicular tunnel under the Hudson river.

Bonds Authorized.—During the past year bond issues have been authorized in the various

countries in the United States amounting to approximately \$125,000,000. The amounts authorized in each state are indicated as follows:

Alabama	\$2,000,000
Arizona	2,000,000
Arkansas	2,000,000
California	2,000,000
Colorado	2,000,000
Connecticut	2,000,000
Delaware	2,000,000
District of Columbia	2,000,000
Florida	2,000,000
Georgia	2,000,000
Idaho	2,000,000
Illinois	2,000,000
Indiana	2,000,000
Iowa	2,000,000
Kentucky	2,000,000
Louisiana	2,000,000
Maine	2,000,000
Massachusetts	2,000,000
Michigan	2,000,000
Minnesota	2,000,000
Mississippi	2,000,000
Montana	2,000,000
Nebraska	2,000,000
Nevada	2,000,000
New Hampshire	2,000,000
New Jersey	2,000,000
New Mexico	2,000,000
New York	2,000,000
North Carolina	2,000,000
North Dakota	2,000,000
Oklahoma	2,000,000
Oregon	2,000,000
Rhode Island	2,000,000
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Washington	2,000,000
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Wisconsin	2,000,000
Wyoming	2,000,000
Total	\$209,000,000

Officials of the bureau of public roads estimate that there is still available approximately \$100,000,000 of federal aid funds for allocation to projects in the various states. This, together with funds obtained from bond issues, from direct levies, and other sources of state revenue, from county bond issues and appropriations will, it is estimated, make available for expenditure at present between a billion and a billion and a quarter dollars.

Funds Appropriated.—The funds derived from state and local bond issues, however, and that to be received from the federal government will be spread out over a period of years and it is doubtful whether much more than one-half of this vast sum will be applied to the construction and maintenance of roads during 1921. Assuming that the expenditures will continue to increase at about the same rate as those for the past two years, it is estimated that there will be expenditure for road purposes during 1921 approximately \$100,000,000.

At the recent election bond issues were defeated in these states:

Florida	\$20,000,000
Georgia	15,000,000
Washington	20,000,000
New Mexico	2,000,000
Arizona	2,000,000
California	2,000,000
Colorado	2,000,000
Connecticut	2,000,000
Delaware	2,000,000
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The proposed change which the state highway engineer of Arizona was to have been submitted by a committee of five members was also defeated. In Florida and Washington it was intended to use the automobile registration money to fund the bond issue.

The Herald's Auto Quiz

This Week's Questions.

1. Why is it necessary for gasoline to be converted into vapor and mixed with air before it can be used in the automobile engine?

2. What is a simple way to detect a compression leak in a spark plug?

3. What is the simplest test of an ignition coil?

4. In addition to a very lean carburetor mixture what will cause an engine to backfire?

5. What are the usual causes of an engine overheating?

6. Can old motor oil drained from the crankcase be used again as a lubricant for the car?

7. What may be used to clean the cooling system of an engine?

8. If the engine stalls while the car is going up hill and the brakes refuse to work, what may be done to get the car up the hill?

9. Should the tires carry more air in cold weather than in summer?

10. What metal is the best electrical conductor?

Answers to Last Week's Questions.

1. An extreme method of starting an engine in cold weather after priming and choking has been employed without success is to apply heat to the carburetor and inlet pipe by applying water or hot steam and by applying directly to carburetor and inlet pipe.

2. Six dry cells are usually sufficient for emergency ignition purposes, when no other source of current production is used. If dry cells are connected in place of a dead storage battery do not allow the current from a generator to pass through them as they are not made for recharging.

3. The spark control lever should be in the retard position when first starting the carburetor. This is the idling or slow speed adjustment. When the engine runs well, advance the spark and try accelerating. The engine speed by opening the throttle lever to obtain proper high speed adjustments.

4. Supercharge points too close together will not allow the engine to run slowly as the flame area or amount of expansion of the burning gas charge will be too small. A large charge of mixture will burn more quickly than a small amount. When the engine runs well, advance the spark and try accelerating. The engine speed by opening the throttle lever to obtain proper high speed adjustments.

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ROE-KIBBE MOVES TO MESA AVE.

The Roe-Kibbe company has moved from Overland & Campbell streets to new quarters at 111 Mesa avenue. The company is southwestern distributor for the Cletro tractor, Douglas truck and Tractamobile. The Roe-Kibbe company, dealer in farm implements, remains at the old address. In making the move, E. T. Robinson, vice president and general manager of the Roe-Kibbe company, will handle the Cletro tractor, Douglas truck and Tractamobile. The Roe-Kibbe company, dealer in farm implements, remains at the old address. In making the move, E. T. Robinson, vice president and general manager of the Roe-Kibbe company, will handle the Cletro tractor, Douglas truck and Tractamobile.

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